

## **ANALYSIS METHOD**

### **ABSTRACT**

Disclosed herein is a method for determining the presence of an activated catalyst site in a catalyst system comprising a catalyst precursor and an activator, wherein the catalyst system is capable of providing a luminescence, the method comprising: performing a time resolved luminescence analysis on a reference analyte comprising the catalyst precursor that is not in combination with the activator, and performing a time resolved luminescence analysis on a sample analyte comprising the catalyst precursor in combination with the activator, determining a reference emission energy and a reference lifetime each associated with a maximum emission intensity in the reference output values; determining a sample emission energy and a sample lifetime each associated with a maximum emission intensity in the sample output values; and comparing the values to determine if the sample comprises an activated catalyst site. Use of the above method in relation to an activation index is also disclosed.